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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-3194
Plant ID No.:	033-00211
Applicant:	Specialty Groups, Inc. (SGI)
Facility Name:	Lost Creek Facility
Location:	Harrison County
NAICS Code:	238320 - Painting and Wall Covering Contractors
Application Type:	Construction
Received Date:	June 03, 2014
Engineer Assigned:	John Legg
Fee Amount:	$1,000.00
Date Received:	June 06, 2014
Complete Date:	June 17, 2014 (Date the newspaper affidavit was e-mailed to the writer)
Due Date:	September 17, 2014
Applicant Ad Date:	June 10, 2014
Newspaper:	*The Exponent Telegram* (published in the city of Clarksburg)
UTM's:	Easting: 565.513 km Northing: 4,334.503 km Zone: 17 (Latitude 39.157272° and Longitude -80.24175°)
Description:	After-the-fact construction of a abrasive blasting and paint/coating facility consisting of 2 abrasive blast bays and 4 paint Bays.

SGI's abrasive blasting and paint/coating facility is located at 10771 Buckhannon Pike, Lost Creek, Harrison County, WV. The facility operated in 2012 and 2013, and began construction/expansion (on three new paint bays) on January 1, 2014 in advance of the DAQ's receipt of permit application R13-3194 (received on June 3, 2014). According to the permit application, the facility was to have started up on May 1, 2014. Prior to the submission of permit application, SGI's facility did not have a construction permit.

DESCRIPTION OF PROCESS

The item(s) to be painted are dropped off in the storage and lay-down yard. Some items are pressure washed and de-greased. Next the item(s) are put in one of the two abrasive blast bays (1S or 2S) for cleaning by sand/abrasive blasting. The item(s) are then moved to one of the four painting Bays (3S thru 6S), hand or power tool cleaned as needed, taped or masked, and painted and cured. After coating has cured, the item(s) are taken to the lay-down yard for packaging or loading onto truck for customer pickup or delivery.

Table 1: Emission Units for SGI's Abrasive Blasting and Paint/Coating Facility located near Lost Creek, Harrison County, WV.

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
1S	1E	Abrasive Blast Bay 1	2014	10.21 ton/hr	Curtained Enclosure
2S	2E	Abrasive Blast Bay 2	2014	10.21 ton/hr	Curtained Enclosure
3S	3E	Paint Bay 1	2014	82 ton/hr	1C Filter Pads
4S	4E	Paint Bay 2	2014	82 ton/hr	2C Filter Pads
5S	5E	Paint Bay 3	2014	82 ton/hr	3C Filter Pads
6S	6E	Paint Bay 4	2014	82 ton/hr	4C Filter Pads

Table 2: SGI's Two (2) Abrasive Blast Bays (1S and 2S).		
Manufacture Name and Model No.		Not Given - Curtained Enclosures
Maximum Process Material Charged		10.21 ton/hr
Maximum Material Produced per hour		10.21 ton/hr
Projected Operating Schedule		24 hr/day; 5 day/wk; 52 weeks/yr
Emissions (per each bay)	PM	11.8 lb/hr 15.36 ton/yr
	PM_{10}	5.7 lb/hr 7.4 ton/yr
Description (based on photographs included in permit application, page 326, Attachment L1)		Canvas Curtains hung from Metal Framed Structure/Support. Located outside to any permanent building on flat/level ground.

Table 3: SGI's Four (4) Paint Bays (3S thru 6S).	
Name/Type/Model of Source`	Cinder Block Bays with Garage Doors at End of Each Bay (See permit application, page 331 thru 333, Atachment L2).
Maximum Amount of Process Material Charged Per Hour	82 ton/hr of steel
Filter Size	20" X 20"
Monitoring	Manometer on each exhaust fan duct set to 0.1 when the filters are new. Filters are replaced with the manometer reads > 1.0.
Filter PM Removal Efficiency	99.38% (per permit Application, page 337)

SITE INSPECTION

DAQ considers SGI's facility to be an after-the-fact construction. Brian Tephabock, (Enforcement Supervisor ; DAQ's North Central Regional Office, Fairmont, WV) inspected the facility on September 4, 2014. The company is/was very responsive to Brian's/DAQ's comments and seemed attentive and eager to complete additional tasks that Brian recommended them to do.

As for the abrasive blasting bays/area, Brian specifically asked Specialty to better secure the bottom and tops (specifically the end of the bays' eaves/tops); and the corners of the abrasive blasting bays such that emissions are better contained/minimized. Once this has been completed Brian is confident that the facility will be adequate to meet DAQ's requirements. Brian said that the area was clean around the blasting bays with little-to-none abrasive blast media outside the bay areas.

Directions to the facility as given in the application:

> From I-79, Exit 115, proceed east on Route 20 toward Buckhannon/Philippi. At 4 miles from I-79, soon after passing Bell Meadows Golf Course on the right, turn right to continue on Route 20 toward Buckhannon. Go 2.5 miles farther to the SGI facility on the left in a right-hand curve at the intersection of Raccoon Creek Road (County Route 20/22). Physical address is 10771 Buckhannon Pike, Lost Creek, WV 26385.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

SGI's emissions were estimated by Gene Coccari of DAQ's Small Business Assistance Program (SBAP) and are found in Attachment N to the permit application. The writer reviewed the emissions and found them to be reasonable.

Potential emissions (PM and VOC emissions) for the facility, as advertised in SGI's June 10, 2014 legal advertisement (*The Exponent Telegram*), are listed below in Table 4.

Table 4: PTE Emissions as Listed in SGI's Legal Advertisement for Their Lost Creek, Harrison County, WV Facility.

Pollutant		Controlled Emission (ton/yr)
PM		35 (1)
PM_{10}		18 (2)
VOC		22
HAPs	(3) Xylene	6
	(3) Hexamethylene Diisocynate	3
	(3) Ethyl Benzene	2
	(4) Total	12

(1) PM emissions from the Two (2) Abrasive Blast Bays (31 ton/yr) and the Four (4) Painting Bays (4 ton/yr) are less than advertised in the newspaper. See the tables below for additional details.

(2) Conversion Factor: $PM_{10} = PM / 2.1 \approx 18$ ton/yr. Emissions are less than advertised in the newspaper.

(3) Individual speciated HAPs can not exceed 10 TPY for the facility to remain a non-major source.

(4) Aggregated HAP emissions must not exceed 25 TPY or the facility will become a major source of HAPs. Because VOC emissions are limited to 22 TPY or less, the facility can not become major without exceeding the 22 TPY VOC limit in the permit.

Table 5: PM and PM_{10} Emissions in R13-3194 for SGI's Lost Creek, Harrison County, WV Facility.

Pollutant	Emission Point ID	Emission Source	Before Control		After Controls		Comments
			lb/hr	ton/yr	lb/hr	ton/yr	
PM	1E	1S - Abrasive Blast Bay	11.8 (1)	15.36 (2)	11.8	15.36	No Control other than Curtained Enclosure.
	2E	2S - Abrasive Blast Bay	11.8 (1)	15.36 (2)	11.8	15.36	No Control other than Curtained Enclosure.
	Sub-Total		23.6	30.72	23.6	30.72	
	3E	3S - Paint Bay	111.8 (3)	0.944	1.76 (4)	0.0944	90% Control - Filter Pads
	4E	4S - Paint Bay	111.8 (3)	0.944	1.76 (4)	0.0944	90% Control - Filter Pads
	5E	5S - Paint Bay	111.8 (3)	0.944	1.76 (4)	0.0944	90% Control - Filter Pads
	6E	6S - Paint Bay	111.8 (3)	0.944	1.76 (4)	0.0944	90% Control - Filter Pads
	Sub-Total		447.2	3.776	7.05	0.3776	
	Total		470.8	34.496	30.7	31.10	
PM_{10}	Two (2) Abrasive Blast Bays		11.3	14.63	11.3	14.63	
	Four (4) Paint Bays		213.0	1.80	3.36	0.18	
	Total		224.2	16.43	14.6	14.81	PM_{10} = PM/2.1

(1) Based on using 437 lb/hr of black beauty and the AP-42 emission factor (5th edition) from Chapter 13.2.6 of 27 lb/1,000 lb of abrasive bast media at a wind speed of 5 mph.
(2) Based on operating 2,604 hr/yr.
(3) Based on spraying 5 gal/hr of Interzinc 52 Base weighing 22.36 lb/gal.
(4) Based on a paint/coating transfer efficiency of 30% , a settling chamber efficiency of 80%, a filter pad control efficiency of 90%, and a PM to PM_{10} ratio of 2.1.

Table 6: VOC and HAP Emissions in R13-3194 for SGI's Lost Creek, Harrison County, WV Facility.

Pollutant	Uncontrolled Emissions			
	One Paint Bay		Four Paint Bays	
	lb/hr	ton/yr	lb/hr	ton/yr
VOC	38.1 (1)	5.36	152.4 (2)	21.44
Total HAP's	38.1 (1)	2.77	152.4 (2)	11.08

(1) Based on spraying 5gal/hr of Xylol (thinner) having a VOC and HAP content (100 % xylene) of 7.62 lb/gal.
(2) Unlikely but not impossible that all four (4) paint bays would be spraying thinner at the same time.

VOC emissions from the facility are limited to 22 ton/yr by the proposed permit, i.e., aggregated total HAP emissions can not exceed 25 ton/yr without exceeding the facility VOC limit. Single HAP emissions from the facility can not exceed 10 ton/yr. Record keeping requirements in the permit track individual HAP emissions and do not allow emissions to exceed 10 ton/yr without being in violation of the permit.

PM & PM_{10} Emissions from Abrasive Blasting

SGI currently uses Black Beauty for its abrasive blast media. The company may in the future change to garnet. Media usage, based on a growth factor of 50% over the current usage rate, is equal to 285 ton/yr.

PM emissions were calculated using an emission factor from the 5th edition of AP-42, Chapter 13.2.6 entitled: "Abrasive Blasting." Since SGI's blasting is uncontrolled, the SBAP used the "Sand Blasting of Mild Steel Panel" and "5 mph wind speed" factor of 27 pounds of total PM emissions per 1,000 pounds of abrasive blast media used. (To convert from PM to PM_{10}, a PM to PM_{10} ratio of 2.10 was used.)

Based on a Black Beauty usage rate of 284.31 ton/yr for the facility (before the expansion), the following PM and PM_{10} emission rates were calculated:

PM_{30} = 27 lb/1,000 *(284.31 ton/yr * 2,000 lb/ton) = 15,353 lb/yr or 7.68 ton/yr
PM_{10} = 7.68 ton/yr ÷ 2.10 = 3.66 ton/yr

Because future paint/coating usage at the facility is estimated to increase by a factor of 4, the Black Beauty usage rate and PM/PM_{10} emission rates from abrasive blasting were increased by the same factor:

Abrasive Blast:	Usage Rate:		=	284.31 ton/yr X4
			=	1,137 ton/yr
	Emission Rates:	PM_{30}	=	7.68 ton/yr X 4
			=	30.71 ton/yr
		PM_{10}	=	3.67 ton/yr X 4
			=	14.63 ton/yr

PM & VOC EMISSIONS FROM PAINTING

SGI has 4 separate paint Bays, three of which are new constructions, that use many different coatings.

The DAQ's SBAP:

- sorted the many different coatings into 3 groups: Primers, Solvents, and Topcoats.

- increased actual paint usage for the facility by a factor of 1.5 (50%) to calculate future total VOC, PM, and HAP emission rates. This was done based on SGI's suggested increase and submission of data (Specialty Groups, Inc., Shop Painting Material Usage, Revision 11-1-13, under the data column entitled "Average Annual Usage + 50%").

- multiplied the facility emission rates by a factor 4 to account for the three (3) new paint bays, thus assuming in the future that each of the 4 paint Bays will coat/paint as much as what was coated/painted previously by the entire facility.

- used a 90% control factor from SGI's use of filter pads in the exhaust streams from each of the paint bays to reduce PM emissions. The 90% reduction factor is thought by the writer to over-estimate emissions, i.e., filter pad test results presented in the application (page 337) were found to have a 99.38% PM removal efficiency.

Table 7: Emissions from SGI's Paint Bays, Lost Creek, Harrison County, WV.

Pollutant		Facility Emission Rate (ton/yr)	
		Actual X 1.5 (50% Increase)	**4 X (Actual X 1.5)**
Uncontrolled PM_{30} (overspray)		0.944	3.78
Total VOCs		5.36 *	21.44
Three Largest HAP Emissions	Xylene	1.41	5.64
	Hexamethylene - 1-6-Diisocynate	0.65	2.58
	Ethylbenzene	0.46	1.83
	Sub-total	2.52	10.05
Other HAPs (Other than 3 largest HAPs)		0.25	1.03
Total HAP Emissions		2.77	11.08

* Based on coating 520 hr/yr (facility operating 2600 hr/hr).

Table 8: Inflated (by SGI by a factor of 1.5) Actual Annual Emissions (Ton/Yr) from SGI's Paint Bay.						
Painting/ Coating Groups	**VOC**	**PM**	**Total HAPs**	**Xylene**	**Hexamethylene -1-6- Diisocyanate**	**Ethylbenzene**
Topcoats	1.32	0.53	1.33	0.43	0.65	0.20
Thinners	3.32	0.00	0.89	0.67	0.01	0.18
Primers	0.73	0.42	0.56	0.31	0.00	0.05
Total	**5.36**	**0.95**	**2.77**	**1.40**	**0.65**	**0.42**

REGULATORY APPLICABILITY

SGI's Lost Creek, WV facility is a non-major stationary source, not subject to Title V (45SCR30) because it is not subject to a standard or other requirement under § 112 of the Clean Air Act.

Applicable State Rules:

45CSR7 - **To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations**

The purpose of Rule 7 is to prevent and control particulate matter air pollution from manufacturing processes and associated operations.

The two (2) Abrasive Blast Bays (1S and 2S) and the four (4) Paint Bays (3S thru 6S) and are subject to the emissions standards of 45CSR7.

45CSR§7-3.1. - Opacity can not exceed 20%.

45CSR§7-5.1. - Must be equipped with control system(s) to minimize fugitive PM.

The Abrasives Blast Bays have sidewall, endwall, and entrance curtains to act as enclosures. The Paint Bays have exhaust pad filters to capture paint solids.

45CSR§7-8.1. - Director may required PM stack testing.

45CSR§7-8.2. - Director or his representative may conduct tests to evaluate emissions.

45CSR§7-9.1. - Continued operation allowances for unavoidable malfunction of equipment.

45CSR13 - **Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, Permission to Commence Construction, and Procedures for Evaluation**

SGI's Lost Creek Facility has the potential to discharge more than six (6) pounds per hour and ton (10) tons per year of PM and VOC.

SGI is subject to substantive requirements of emission control rules promulgated by the Secretary:

- The two (2) Abrasive Blast Bays (1S and 2S) and the four (4) Paint Bays (3S thru 6S) and are subject to the PM emission standards of 45CSR7.

New Federal Area Source Rules

Per Gene Cocarri's January 2, 2014 letter to Mr. Robert S. Hamilton, Project Manager, Specialty Groups, Inc.:

NESHAP 6X - "National Emission Standards for Hazardous Air Pollutants (NESHAP): Area Source Standards for Nine Metal Fabrication and Finishing Source Categories" rule.

After discussions with SGI, given that they base the fact that what little metal fabrication that takes place on-site is purely manintenance in nature, it is thought that the facility is not subject to Subpart 6X.

NESHAP 6H - "National Emission Standards for Hazardous Air Pollutants (NESHAP): Paint Stripping and Miscellaneous Surfact Coating Operation at Area Sources.

To ensure that SGI will not be subject to the provisions of Subpart 6H - it must be ensured that no coating used at the facility contains the following HAPs: Nickel, Maganese, Cadmium, Chromium, and Lead compounds. Miscellaneous metal parts coaters that "perform spray application of coatings that contain the target HAP [listed above], as defined in Section 63.11180, to a plastic and/or

metal substrate on a part or product," are subject to this subpart. For those miscellaneous metal parts coating facilities that don't spray the target HAP, there is an automatic exemption. Inclusion under this subpart would require stricter control devices, at a minimum. As the SBAP reviewed the coatings MSDS at the facility in performing the emissions calculations, ti was found that at this time SGI has no target HAPs in it's coatings. SGI needs to review all new coatings used to ensure that this remains true.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

The following MSDSs were submitted in Attachment H to the application. HAPs if present are listed for each MSDS. The first time a HAP is listed/appears in the table, it is **bold-blocked**.

Table 9: HAPs in Paints/Coatings Used at SGI's, Lost Creek Facility, Harrison County, WV.

No.	Name of Coating/ Thinner/EQPT Cleaner	Reference No.	HAP		
			CAS	Name	Max %
H1	Chem-o-pon Non-Chrome Primer Jones Blair	33304	1330-20-7	Xylene	7 %
			100-41-4	Ethylbenzene	1.5 %
			108-10-1	Methyl Isobutyl Ketone (Hexone)	7 %
H2	Acrylithane HS Enamel Blue Jones Blair	45398	100-41-4	Ethylbenzene	1.0 %
H3	Acylithane Medium Reducer Jones Blair	21092	108-10-1	Methyl Isobutyl Ketone (Hexone)	30 %
			1330-20-7	Xylene	30 %
			100-41-4	Ethylbenzene	5 %
H4	Bar Rust 235 International	235BXXXX (1642; 2531; 2534; 2904; 2973; 3501; 7821; 9500; 9601; 9602; 9603) 235CXXXX (0910; 0980)	100-41-4	Ethylbenzene	1.0 %
			1330-20-7	Xylene	5 %
			98-82-8	1-Methylethyl-benzene (Cumene)	1 %
H5	Devthane 379 H Safety Yellow Part A International	DC379F9400	100-41-4	Ethylbenzene	1.0 %
H6	Devoe Thinners	XXXT0000 (000; 005; 010; 015; 017; 030)	100-41-4	Ethylbenzene	10 %
			108-10-1	Methyl Isobutyl Ketone (Hexone)	30 %
			108-88-3	Methyl-Benzene (Toluene)	5 %

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No.	Name of Coating/ Thinner/EQPT Cleaner	Reference No.	HAP		
			CAS	Name	Max %
			1330-20-7	Xylene	90%; 5%; 50%; 5%
			50-00-0	Formaldehyde	0.1%
			71-43-2	Benzene	0.1 %
			98-82-8	1-Methylethyl-benzene (Cumene)	5 %
H7A	Zinc Clad III HS Organic Zinc-Rich Epoxy Primer (Part A), Grey Sherwin Williams	B69AW100	100-41-4	Ethylbenzene	7 %
			1330-20-7	Xylene	39 %
H7B	Zinc Clad III HS Organic Zinc-Rich Epoxy Primer (Part B), Hardener Sherwin Williams	B69AV100	100-41-4	Ethylbenzene	2 %
			1330-20-7	Xylene	12 %
H8A	Macropoxy 646 Fast Cure Epoxy Coating (Part A), Mill White Sherwin Williams	B58W610	100-41-4	Ethylbenzene	3 %
			1330-20-7	Xylene	15 %
H8B	Macropoxy 646 Fast Cure Epoxy Coating (Part B), Hardener Sherwin Williams	B58V600	100-41-4	Ethylbenzene	0.3 %
			1330-20-7	Xylene	2 %
			108-10-1	Methyl Isobutyl Ketone (Hexone)	10 %
H9	Hi Solids Polyurethane - Gloss (Part S), Ultradeep Base Sherwin Williams	B65T304		No HAPs	
H10	Reducer 54 Sherwin Williams	Reducer #54; 530-8671/ 530-8689/ 530-8697	100-41-4	Ethylbenzene	4 %
			1330-20-7	Xylene	22 %
			108-10-1	Methyl Isobutyl Ketone (Hexone)	51 %
H11	Reducer #58 Sherwin Williams	530-8713	100-41-4	Ethylbenzene	7 %
			1330-20-7	Xylene	42 %
H12A	Carbozinc 899 Part A Organic Zinc Rich Epoxy Carboline	PLMSDS 0486A1NL	108-88-3	Methyl-Benzene (Toluene)	25 %
			108-38-3	Meta-Xylene	5 %
			100-41-4	Ethylbenzene	0.7 %
H12B	Carbozinc 899 Part B Organic Zinc Rich Epoxy Carboline	PLMSDS 0486C1NL	108-88-3	Methyl-Benzene (Toluene)	50 %
			108-38-3	Meta-Xylene	5.0 %
			100-41-4	Ethylbenzene	0.7 %
H13A	Carboguard 888 Part A Epoxy Polyamide Carboline	PLMSDS 0998A 1NL	108-88-3	Methyl-Benzene (Toluene)	10.0 %

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No.	Name of Coating/ Thinner/EQPT Cleaner	Reference No.	HAP		
			CAS	Name	Max %
			108-38-3	Meta-Xylene	5.0 %
			108-10-1	Methyl Isobutyl Ketone (MIBK aslo Hexone)	5.0 %
			106-42-3	Para-Xylene	5.0 %
			100-41-4	Ethylbenzene	5.0 %
			95-47-6	Ortho-Xylene	5.0 %
H13B	Carboguard 888 Part B Epoxy Polyamide Carboline	0998B 1NL	100-41-4	Ethylbenzene	1.0 %
H14A	Carbothane 133 HB Part A Aliphatic Acrylic Polyurethane Carboline	PLMSDS 0840A 1NL	108-38-3	Meta-Xylene	10.0 %
			108-88-3	Toluene	5.0 %
			106-42-3	Para-Xylene	5.0 %
			100-41-4	Ethylbenzene	5.0 %
			95-47-6	Ortho-Xylene	5.0 %
H14B	Urethane Converter 133 Catalyst for Polyurethane Products Carboline	PLMSDS 0840B 1NL	108-38-3	Meta-Xylene	10.0 %
			106-42-3	Para-Xylene	5.0 %
			100-41-4	Ethylbenzene	5.0 %
			95-47-6	Ortho-Xylene	5.0 %
			822-06-0	Hexamethylene -1,6-Diisocyanate	0.6 %
H15A	Carbozinc 11 HS Base Solvent Based Inorganic Zinc Carboline	0249A 1NL		No HAPs	
H15B	Zinc Filler Type II (fka Special Zinc Filler)	PLMSDS 0229B 1NL		No HAPs	
H16A	Carboguard 893 Part A Cycloaliphatic Amine Epoxy Carboline	PLMSDS 0988A 1NL	108-88-3	Toluene	5.0 %
			108-38-3	Meta-Xylene	5.0 %
			100-41-4	Ethylbenzene	0.6 %
H16B	Carboguard 893 Part B Cycloaliphatic Amine Epoxy Carboline	PLMSDS 0988B 1NL	108-88-3	Methyl-Benzene (Toluene)	10.0 %
H17A	Carbothane 134 HG Part A	0859A 1NL	108-88-3	Methyl-Benzene (Toluene)	10.0 %
			108-38-3	Meta-Xylene	5.0 %
			100-41-4	Ethylbenzene	5.0 %
			106-42-3	Para-Xylene	5.0 %

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No.	Name of Coating/ Thinner/EQPT Cleaner	Reference No.	HAP		
			CAS	Name	Max %
			95-47-6	Ortho-Xylene	5.0 %
H17B	Urethane Converter 811 Catalyst for Polyurethane Products Carboline Company	0856B 1NL	822-06-0	Hexamethylene-1,6-Diisocyanate	1.0 %
H18	Interzinc 52 Base International	EPA 175	1330-20-7	Xylene	10 %
H19A	Intergard 475HS Base Light Part A International	EVA011	100-41-4	Ethylbenzene	10 %
			1330-20-7	Xylene	10 %
H19B	Intergard 475HS Converter	EVA046	100-41-4	Ethylbenzene	10 %
			1330-20-7	Xylene	10 %
H20A	Intergard 345 Base Light Part A International	AAA130	100-41-4	Ethylbenzene	10 %
			1330-20-7	Xylene	10 %
H20B	Intergard 345 Converter	AAA046		No HAPs	
H21A	Interthane 990HS Base Ultra Deep Part A International	99044A		No HAPs	
H21B	Interthane 990HS/870 HS Part B International	990B	822-06-0	Hexamethylene Diisocyanate	1.0 %
H22	International Thinner 415 EQPT Cleaner International	GTA415	100-41-4	Ethylbenzene	25 %
			1330-20-7	Xylene	75 %
H23	Internatil Thinner 007 EQPT Cleaner International	GTA007	100-41-4	Ethylbenzene	25 %
			1330-20-7	Xylene	75 %
H24	Sigma Cover 435 Base Sigma/PPG		1330-20-7	Xylene	<12.50 %
			100-41-4	Ethylbenzene	<10.00 %
H25A	Sigmadur 500 Base Sigma		1330-20-7	Xylene	<25.00 %
			100-41-4	Ethylbenzene	<10.00 %
H25B	Sigmadur 500 Hardener Sigma		1330-20-7	Xylene	<12.50 %
			100-41-4	Ethylbenzene	<10.00 %
			822-06-0	Hexamethylene-1,6-Diisocyanate	<0.50 %
H26	Thinner 91-88 PPG		1330-20-7	Xylene	<50.00 %
			100-41-4	Ethylbenzene	<25.00 %
H27	Thinner 91-92 PPG		1330-20-7	Xylene	<75.00 %
			100-41-4	Ethylbenzene	<25.00 %

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No.	Name of Coating/ Thinner/EQPT Cleaner	Reference No.	HAP		
			CAS	Name	Max %
H28A	Duraplate 235 Multi-Purpose Epoxy (Part A), White Sherwin Williams	B67W235	100-41-4	Ethylbenzene	1 %
			1330-20-7	Xylene	8 %
H28B	Duraplate 235 Multi-Purpose Epoxy (Part B), Hardener Sherwin Williams	B67V235	100-41-4	Ethylbenzene	4 %
			1330-20-7	Xylene	25 %
H29A	Acrolon 218 HS Polyurethane - Gloss (Part A), Ultradeep/Clear Tint Base Sherwin Williams	B65T604	100-41-4	Ethylbenzene	0.4 %
			1330-20-7	Xylene	2 %
			91-20-3	Naphthalene	0.2 %
H29B	Acrolon 218 HS Polyurethane - Gloss (Part B), Hardener Sherwin Williams	B65T604	822-06-0	Hexamethylene-1-6-Diisocyanate	1 %
H30A	Pitthane 35 Porcelain White Comp A PPG	95-850	1330-20-7	Xylene	2 %
			98-82-8	1-Methylethyl-Benzene (Cumene)	1 %
			80-62-6	Methyl Methacrylate	1 %
H30B	Pittance 35 Component B Polyisocyanate PPG	95-859 (0814)	822-06-0	Hexamethylene-1,6-Diisocyanate	1.0 %
H31	Pitt-Guard Rapid-Coat Porc White PPG	95-245	1330-20-7	Xylene	10 %
			100-41-4	Ethylbenzene	1.5 %
H32	MEK Fisher (Various Sources)	ACC# 14460		No HAPs (De-Listed)	
H33	Xylol Fisher (Various Sources)	97-727	1330-20-7	Xylene	100 %
			100-41-4	Ethylbenzene	30 %
			108-88-3	Methyl-Benzene (Toluene)	1 %
H34	Xylene ICC (Various Sources)		1330-20-7	Xylene	100 %
H35	Mineral Spirits < 1% ICC	12110		No HAPs	
H36	Black Beauty Abrasive Reed Minerals, Harsco Corporation			No HAPs	

AIR QUALITY IMPACT ANALYSIS

SGI's Lost Creek, WV facility is considered to be an non-major source. No impact analysis study was conducted for the source.

MONITORING & RECORD KEEPING REQUIREMENTS

Permit Section 5.2.1. Monthly visible emission checks (and/or opacity monitoring) are to be conducted for the two Abrasive Blast Bays (1S and 2S) and the four (4) Paint Bays (3S thru 6S). See permit section 5.1.8. **[45CSR§7-3.1.]**

Permit Section 5.4.1. Paint Bays (3S thru 6S) Daily VOC Emission Rate. The following records are to be kept on a daily basis for each of the four (4) Paint Bays: name, identification number, and number of gallons of coating applied; the mass of VOC per volume of each coating (minus water and exempt compounds, as applied). An example record is given in Appendix B to the permit. Records are to be kept for three years. See permit section 5.1.3.

Permit Section 5.4.2. Records of monthly visible emission checks (and/or opacity monitoring) of the Abrasive Blast Bays (1S and 2S) and the Paint Bays (3S thru 6S) are to be kept for three years. An example record is given in Appendix A. See permit section 5.1.8. **[45CSR§7-3.1.]**

Permit Section 5.4.3. Record of Abrasive Blast Media Usage. On a daily basis, record: 1) the amount of abrasive used and/or added, and the 12-month rolling total abrasive usage and or addition rate. See permit sections 5.1.6. and 5.1.7.

Permit Section 5.4.4. Daily Cleaning Solvent(s) Usage. Daily records of the amount of cleaning sovent(s) used, the VOC content of the cleaning solvent(s) (if less than 100%), the amount of cleaning solvent(s) emitted [subtracting out any used cleaning solvent(s) captured and not allowed to evaporate] and the 12-month rolling VOC cleaning solvent(s) emission rate for the facility. Records are to be maintained for three years. See permit section 5.1.3.

Permit Section 5.4.5. Daily records are to be kept of all single HAP emission rate(s) for the facility using information collected from Paint Bay (3S thru 6S) operations and from cleaning solvent(s) usage for the facility. See permit section 5.1.1.

Permit Section 5.4.6. Permittee to record when the exhaust filters are changed out. If not all the pads/filters are changed out at the same time, then the location of the changed out and non-changed out pads/filters are to be noted for the record. See permit section 5.1.3.

Permit
Section 5.5.1. Permittee is to notify DAQ/Director in writing of the use of any new surface coating containing any HAP(s) within thirty days of use. An MSDS shall be included with the notice to the DAQ. See permit section 5.1.1.a.

RECOMMENDATION TO DIRECTOR

SGI's request for an after-the-fact permit for the construction of an abrasive blasting and paint/coating facility at their Lost Creek, Harrison County, WV facility meets the requirements of all applicable rules and therefore should be granted said construction permit (R13-3194).

John Legg
Permit Writer

September 5, 2014